4238

BOARD DIPLOMA EXAMINATION, (C-14)
JUNE-2019
DECE - THIRD SEMESTER EXAMINATION
ELECTRONIC DEVICES & CIRCUITS

Time: 3 Hours]   **[Max. Marks: 80**

PART - A

10x3=30M

Instructions: 1) Answer **all** the questions. Each question carries **three** marks.

         2) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1) What are Cut-off, Saturation and Active regions of transistor?

2) State the Reasons for wide use of CE Amplifer.

3) State the advantages and disadvantages of base bias with collector feedback.

4) Draw the circuit of common source FET amplifier.

5) Compare Negative feedback and positive feedback.

6) List the distorions in amplifiers.

7) State the requisites of an Oscillator.

8) List the applications of photo diode and photo transistor.

9) List the applications of Varactor Diode.

10) Draw the circuit of Transistor series Voltage Regulator.

PART - B

Instructions: 1) Answer any **five** questions.

2) Each question carries **ten** marks.

3) Answers should be comprehensive and the critertion for valuation is the content but not the length of answer.

11) Explain the input/output characteristics of Transistor in CE and CB configurations. (5+5M)

12) Explain potential divier bias of a Transistor and mention its advantages.

13) (a) Explain the opertion of Darlington pair with the help of circuit diagram. (5M)

(b) Draw and explain the operation of single tuned amplifier. (5M)

14) Draw the Block diagrams and explain the four types of Negative Feedback circuits.

15) Explain the working of transistor push pushpull amplifier circuit.

16) Explain the Construction and Principle of operation of (5+5M)

(a) Depletion type N-Channel MOSFET.

(b) Enhancement type N-channel MOSFET.

17) Explain the applications of LED and LCD in Discrete Displays, Dot Matrix and Seven Segment Displays.

18) Draw the circuit of transistor astable multivibrator and explain the operation.

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